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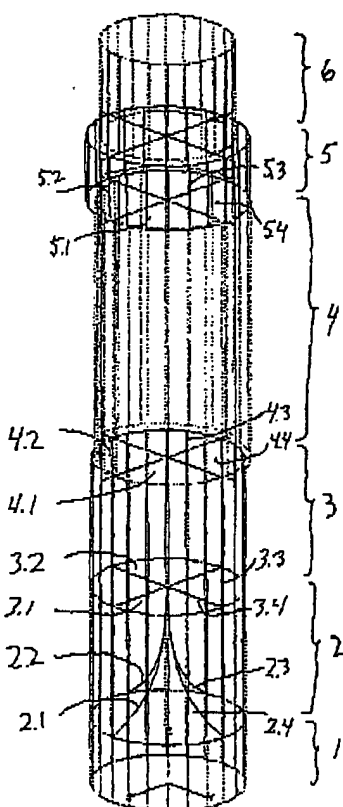
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(54) Title: **METHOD FOR CONVERSION OF WAVEGUIDE MODES, MODE-CONVERTING ARRANGEMENT AND ANTENNA ARRANGEMENT.**

WO 2004/047217 A1



(57) **Abstract:** The invention relates to a method for conversion of waveguide modes from a mode of type TM_{01} to mode of type TE_{11} for transmission of power within the microwave range. The invention also relates to a mode-converting arrangement and an antenna arrangement with such a mode-converting arrangement. The mode-converting arrangement comprises an incoming waveguide (1) for reception of power of the type TM_{01} , an outgoing waveguide (6) for outputting power of mode type TE_{11} and a waveguide-mode-converting section (2-5) arranged between the incoming and outgoing waveguides. According to the invention, incoming power of mode type TM_{01} is divided in an input section (2) between two or more waveguides with cross-sections in the shape of circle sectors. Thereafter, the divided power is phase-shifted by the waveguides in a subsequent phase-shift section (4) being designed with cross-sections that are essentially in the shape of circle sectors with different radii, after which the waveguides are changed into a common essentially circular waveguide (6) that emits an outgoing power of mode type TE_{11} . By means of the invention, a relatively simple solution is produced, that can cope with high powers.



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